




# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,538	01/04/2002	Joerg Bewersdorf	5005.1016	7277
23280	7590	02/21/2006	EXAMINER	
DAVIDSON, DAVIDSON & KAPPEL, LLC 485 SEVENTH AVENUE, 14TH FLOOR NEW YORK, NY 10018			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/037,538	Applicant(s) BEWERSDORF ET AL. 	
	Examiner Thong Q. Nguyen	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005 and 02 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-14,16-20,22 and 26-38 is/are pending in the application.
- 4a) Of the above claim(s) 26-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-14,16-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The present Office action is made in response to the amendments filed on 11/9/05 and 12/02/05.

In the amendment of 11/9/05, applicant has made changes to the specification and provided arguments in response to the rejections of pending claims set forth in the Office action of 8/5/05. It is noted that applicant has failed to file a list of claims in the amendment of 11/9/05.

In the supplemental amendment of 12/2/05, applicant has filed a list of pending claims in which claims 1-2, 4, 6-13, 16-17, 19-20 and 22 are amended and claims 3, 5, 15, 21 and 23-25 are canceled. As a result of the changes to the claims, the application now contains claims 1-2, 4, 6-14, 16-20, 22 and 26-38 are now pending in which claims 26-38 are non-elected claims.

### ***Specification***

2. The lengthy specification which is amended by the amendment of 11/9/05 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2872

4. Claims 1-2, 10, 13-14 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulmer (U.S. Patent No. 5,776,674).

Ulmer discloses an incoherent interference illumination microscope. The microscope as described in columns 2-3 and shown in figs. 1 and H comprises a laser source for determining an intensity profile in a specimen region of the microscope, an optics for guiding light from the specimen to a detecting system via beamsplitters (46), image forming lens system (54,58) and image intensified video camera or other electro-optical imaging device (60). Regarding to the system supporting the specimen, in column 3 and fig. 2H, Ulmer discloses that the system for supporting a specimen (158) comprises two substrates (154, 164) acting as cover glass for supporting the specimen (158) and a thin film coating (156) deposited on one planar surface of the substrates (154, 164) facing the specimen. The system for supporting the specimen is disposed between two objective lens elements (150, 160) wherein the stage (16) supported the system is able to move in two perpendicular directions. See column 2, lines 24-27. The specimen disposed in the film can be a fluorescent sample as disclosed in columns 7-8. Regarding to the detector for detecting light reflected or induced at the coating to measure an intensity signal profile as a function of an axial position of the coating as claimed on last three lines of claim 1, it is noted that in columns 7-11 and fig. 4E, Ulmer disclose the use of a detector system (350) connected to a computer (400) for detection and measurement of the 3-D contour of the fluorescent intensity, time and wavelength of specimen disposed on the thin film

between the two substrates. It is inherent that the signal detected and measured by the detecting system as provided by Ulmer is able to provide user information related to the axial location of the coating disposed between the substrates. Regarding to the feature that the coating is configured to have light induced therein by way of a nonlinear process as recited in claims 13-14, such a method/process step of inducing light at the planar area of the support unit by way of coherent anti-strokes Raman scattering as claimed is not germane to the issue of patentability of the device itself and thus is not given a patentable weight as decided in the Courts. See also *In re Dike*, 157 USPQ 581 (CCPA 1968).

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 4, 6-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulmer in view of Lanni et al (of record).

The system having a coating for inducing light incident thereon as provided by Ulmer does not explicitly state that coating has a reflecting feature or wavelength-dependence as claimed in present claims 4 and 6-9. However, The use of a support system having a cover glass with reflecting feature is disclosed in the art as can be seen in the system provided by Lanni et al. In particular, Lanni et al disclose a standing wave field microscope having an illuminating system having a laser source, an observation system and a system for supporting a fluorescent specimen. The system for supporting a fluorescent

specimen as described in columns 8-10, in particular, in column 9, and shown in figure 7 comprises two specimen support units (76, 88) sandwiched the specimen wherein the first support unit is a dichroic element and the second support unit (88) is a glass plate and acts as a cover for protection of the specimen. The specimen is provided and associated with a lower surface of the support unit (76) wherein light incident and reflect from that surface is used to illuminate and form a standing wave field and then to be detected and observed by the observation system. The support unit (76) can be a wavelength-selective or dichroic reflector or a set of various dichroic reflectors for the collection a complete standing wave luminescence microscopy data array which set of various dichroic reflects are understood as a combination of layers having different luminescent properties. The dichroic reflector is chosen so that its reflectivity is high for a particular wavelength at a particular angle of incidence. It is noted that the dichroic reflector is as understood by one skilled in the art is made by coating a wavelength-selective layer or a dielectric layer on a substrate. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the system supporting a specimen as provided by Ulmer by using a system having a cover glass with reflectance as suggested by Lanni et al for the purpose of reflecting light from the specimen.

7. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulmer in view of Hell (of record).

The interference microscope as provided by Ulmer does not clearly disclose the use of a detecting system having an optical element for splitting light from the illuminated/observed light path to a detector. However, the use of a beamsplitter for splitting light from a specimen to a detecting system having a detector and a pinhole located in front of the detector is known to one skilled in the art as can be seen in the confocal microscope provided by Hell. See page 4 and figure 1 in which the light from the specimen (9) is splitted by the beam-splitter (10) and then is detected by the detector system having a pinhole (12) and a detector (13). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the microscope provided by Ulmer by using a beam-splitter in the light path as suggested by Hell for the purpose of guiding the reflected light to a detecting system for the purpose of further analysis and/or record of the images of the specimen.

### ***Response to Arguments***

8. The amendments to the claims and applicant's arguments with respect to pending claims as filed by amendments of 11/9/05 and 12/2/05 have been considered but are moot in view of the new ground(s) of rejection.

It is also noted that the rejection of claims 1-4, 13-18 and 23-25 under 35 USC 102(e) over the art of Kawano and the rejection of claims 19-21 under 35 USC 103(a) over the art of Kawano et al and Hell, the rejections are moot by the filing of a translation of the foreign priority documentation.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

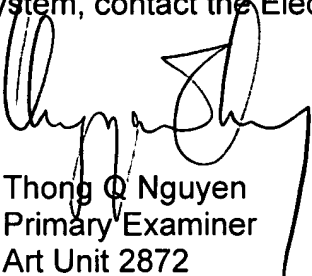
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen  
Primary Examiner  
Art Unit 2872

\*\*\*